October 11, 2018

U.S. Department
of Transportation

**Pipeline and Hazardous
Materials Safety Administration**

East Building, PHH – 30
1200 New Jersey Avenue, Southeast
Washington, D.C. 20590

DOT-SP 20261
(SECOND REVISION)

EXPIRATION DATE: 2022-09-30

(FOR RENEWAL, SEE 49 CFR 107.109)

1. GRANTEE: SAFT S.A.
Levallois-Perret, France

US AGENT: SAFT America, Inc.
Cockeysville, MD

2. PURPOSE AND LIMITATIONS:

a. This special permit authorizes the transportation in commerce of prototype and low production lithium ion cells, batteries and battery assemblies and lithium metal cells and batteries by cargo-only aircraft. This special permit provides no relief from the Hazardous Materials Regulations (HMR) other than as specifically stated herein. The most recent revision supersedes all previous revisions.

b. The safety analyses performed in the development of this special permit only considered the hazards and risks associated with the transportation in commerce.

c. This special permit serves as an approval under Special Provisions A88 and A99, and Packing Instruction (PI) 910 of the Supplement to the ICAO TI and as a "Competent Authority Approval" as defined under 49 CFR § 107.1.

3. REGULATORY SYSTEM AFFECTED: 49 CFR Parts 106, 107 and 171-180 and the ICAO TI.

4. REGULATIONS FROM WHICH EXEMPTED: 49 CFR §§ 172.101 Column (9B) in that batteries are in excess of 35 kg net weight for certain batteries; 173.185(a) in that batteries are not tested in accordance with the UN Manual of Tests and Criteria; and 173.185(b)(5) in that alternative packaging is authorized for certain batteries as specified herein.

5. BASIS: This special permit is based on the application of SAFT S.A. dated September 27, 2018, submitted in accordance with § 107.109.

6. HAZARDOUS MATERIALS (49 CFR 172.101):

Hazardous Material Description			
Proper Shipping Name	**Hazard Class/ Division**	**Identi-fication Number**	**Packing Group**
Lithium ion batteries *including lithium ion polymer batteries*	9	UN3480	N/A
Lithium ion batteries contained in equipment *including lithium ion polymer batteries*	9	UN3481	N/A
Lithium metal batteries *including lithium alloy batteries*	9	UN3090	N/A
Lithium metal batteries contained in equipment *including lithium alloy batteries*	9	UN3091	N/A

7. SAFETY CONTROL MEASURES:

a. SAFETY CONTROLS:

(1) Only prototype (for testing purposes only) lithium metal and lithium ion cells and batteries, and low production (annual production not more than 100 batteries of any given type) lithium ion batteries and battery assemblies may be offered for transportation under the terms of the requested special permit. Each different cell, battery and battery assembly type must comply with all conditions of this special permit.

(2) Cells and batteries, including batteries within a battery assembly, must incorporate a safety venting device or otherwise be designed in a manner that precludes violent rupture under conditions normally incident to transportation.

(3) Batteries and battery assemblies when, connected in parallel, must be equipped with an effective means to prevent dangerous reverse current flow (e.g., diodes, fuses, etc.).

(4) Cells and batteries must be protected against short circuit during transport.

(5) Cells and batteries must be offered for transportation at a state of charge not greater than 30%.

(6) The lithium content of a lithium metal cell must not exceed 22 g, and the Wh rating of a lithium ion cell must not exceed 300 Wh.

(7) The lithium content of a lithium metal battery must not exceed 500 g, and the Wh rating of a lithium ion battery must not exceed 8,000 Wh.

(8) The Wh rating of any lithium ion battery assembly must not exceed 210,000 Wh.

(9) Battery assemblies with a Wh rating exceeding 6,200 Wh must be equipped with a battery management system (BMS) that has been verified as preventing overcharge, short circuits, or over discharge between the batteries.

b. TESTING:

(1) For purposes of these testing requirements a cell or battery type must be determined in accordance with 38.3.2.2 of the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition.

(2) Prototype and low production cells: Each different cell type must be subjected to the following test - three cells would be stored at 55°C for at least 48 hours followed by a short circuit test (connecting a conductor across the positive and negative terminals

for at least 1 hour after the case temperature has returned to 55°C).

(3) Low production batteries: Each low production battery, including batteries in a battery assembly, must be comprised of cells of a type that has passed all required tests in accordance with the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition.

(4) Prototype and low production batteries. Each different battery type must be subjected to the following tests:

(i) If batteries are comprised of cells of a type that have not been demonstrated by testing to pass all required tests as specified in the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition –

(A) Three cells must be stored at 55°C for at least 48 hours followed by a short circuit test (connecting a conductor across the positive and negative terminals for at least 1 hour after the case temperature has returned to 55°C); or,

(B) One battery must be stored at 55°C for at least 48 hours followed by a short circuit test (connecting a conductor across the positive and negative terminals for at least 1 hour after the case temperature has returned to 55°C).

(ii) If batteries are comprised of cells of a type that have been demonstrated by testing to pass all required tests as specified in the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or 6th Revised Edition, one battery of a specific type must be subjected to a short circuit test (connecting a conductor across the positive and negative terminals for at least 1 hour), which may be conducted at a temperature range between room temperature (approximately 23°C) and 55°C.

(5) Cells and batteries are considered safe to transport under the terms of this special permit if the

cells and batteries show no disassembly or fire after completion of these tests. A cell or battery type that has not passed these tests is not authorized to be offered for or transported under the terms of this special permit.

(6) Battery assemblies: Each lithium ion battery assembly transported under this special permit must be comprised of batteries in which the cells are of a type demonstrated by testing to pass all required tests as specified in the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition. In addition, the batteries comprising the battery assemblies must be:

(i) in case of battery assemblies with a Wh rating not exceeding 6,200 Wh,

(A) demonstrated by testing to pass all required tests as specified in the UN Manual of Tests and Criteria, 5th Revised Edition (and Amendment 1) or the 6th Revised Edition; or

(B) of a type tested in accordance with 7.b.(4)(ii) and (5).

(ii) in case of battery assemblies with a Wh rating exceeding 6,200 Wh,

(A) of a type tested in accordance with 7.b.(4)(ii) and (5); and

(B) equipped with a BMS described in 7.a.(9).

c. PACKAGING:

(1) Except as provided in Paragraph 5.c.(4) and 5.c.(5) below, cells and batteries must be individually packaged in inner packagings and surrounded by cushioning material that is non-combustible, and non-conductive;

(2) Cells and batteries must be protected against short circuiting;

(3) Except as provided in Paragraph 5.c.(4) and 5.c.(5) below, cells and batteries must be further packaged in a metal, wooden, or solid plastic outer packaging (i.e., box or drum) that meets Packing Group I performance criteria;

(4) Lithium batteries with a mass of 12 kg or greater and having a strong, impact-resistant outer casing, or assemblies of such batteries may be packed in strong outer packagings or protective enclosures;

(5) Lithium batteries contained in equipment may be packed in strong outer packagings or protective enclosures.

(6) The maximum net weight of lithium metal cells and batteries in a single package must not exceed 35 kg.

(7) The maximum net weight of lithium ion cells, batteries and battery assemblies in a single package must not exceed 800 kg.

d. MARKING: Each package covered under the terms of this special permit must be durably and legibly marked and displayed on a background of contrasting color with "DOT-SP 20261."

8. SPECIAL PROVISIONS:

a. Under the terms of this approval, the approval holder may only offer hazardous materials (i.e., the approval holder is not authorized as a carrier).

b. A person who is not a holder of this special permit who receives a package covered by this special permit may reoffer it for transportation provided no modification or change is made to the package and it is reoffered for transportation in conformance with this special permit and the HMR.

c. A current copy of this special permit must be maintained and made available for examination at each facility where the materials are package and offered or reoffered for transportation.

d. This special permit in no way affects the need to obtain any required authorizations from other agencies of

the United States Government or from the competent authorities of countries of origin, transit and destination.

e. The special permit holder must maintain a record of all activity conducted under the authority granted in this special permit.

f. The record must contain a complete listing and number of shipments made to include:

(1) Dates of Shipment.

(2) Description of each type of shipment (to include origination/destination).

g. All the above information must be made available upon request to a DOT representative or an enforcement Official.

9. MODES OF TRANSPORTATION AUTHORIZED: Cargo-only aircraft.

10. MODAL REQUIREMENTS: A current copy of this special permit must be carried aboard each aircraft used to transport packages covered by this special permit. The shipper must furnish a copy of this special permit to the air carrier before or at the time the shipment is tendered.

11. COMPLIANCE: Failure by a person to comply with any of the following may result in suspension or revocation of this special permit and penalties prescribed by the Federal hazardous materials transportation law, 49 U.S.C. 5101 et seq:

- All terms and conditions prescribed in this special permit and the Hazardous Materials Regulations, 49 CFR Parts 171-180.
- Persons operating under the terms of this special permit must comply with the security plan requirement in Subpart I of Part 172 of the HMR, when applicable.
- Registration required by § 107.601 et seq., when applicable.

Each "Hazmat employee", as defined in § 171.8, who performs a function subject to this special permit must receive training on the requirements and conditions of this special permit in addition to the training required by §§ 172.700 through 172.704.

No person may use or apply this special permit, including display of its number, when this special permit has expired or is otherwise no longer in effect.

Under Title VII of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU)—"The Hazardous Materials Safety and Security Reauthorization Act of 2005" (Pub. L. 109-59), 119 Stat. 1144 (August 10, 2005), amended the Federal hazardous materials transportation law by changing the term "exemption" to "special permit" and authorizes a special permit to be granted up to two years for new special permits and up to four years for renewals.

12. REPORTING REQUIREMENTS: Shipments or operations conducted under this special permit are subject to the Hazardous Materials Incident Reporting requirements specified in 49 CFR §§ 171.15 - Immediate notice of certain hazardous materials incidents, and 171.16 - Detailed hazardous materials incident reports. In addition, the grantee(s) of this special permit must notify the Associate Administrator for Hazardous Materials Safety, in writing, of any incident involving a package, shipment or operation conducted under terms of this special permit.

Issued in Washington, D.C.:

for William Schoonover
Associate Administrator for Hazardous Materials Safety

Address all inquiries to: Associate Administrator for Hazardous Materials Safety, Pipeline and Hazardous Material Safety Administration, U.S. Department of Transportation, East Building PHH-30, 1200 New Jersey Avenue, Southeast, Washington, D.C. 20590.

Copies of this special permit may be obtained by accessing the Hazardous Materials Safety Homepage at http://hazmat.dot.gov/sp_app/special_permits/spec_perm_index.htm Photo reproductions and legible reductions of this special permit are permitted. Any alteration of this special permit is prohibited.

PO: Steve Hwang/Andrew Eckenrode/SG